REMARKS/ARGUMENTS

Applicants would like to thank Examiner Boyle for the helpful and courteous interview held May 28, 2009. As discussed, Applicant has discovered a process for determining the suitability of a silane grafted polyethylene for forming a crosslinked product by analyzing an area of the IR spectrum that measures the Si-O-C bond of the silane present 1) as a reactant in the starting mixture that produces the silane-grafted PE and 2) in the product silane-grafted PE. The fact that this bond can be used to characterize how the silane-grafted PE will behave during crosslinking is not suggested in the art.

In view of the discussion held at the Interview, Applicant has further amended the independent claims herein to make it clear that Applicants' sampling and analysis occurs without purification of the material to be analyzed, as explained at specification page 13, lines 15ff:

> ...[A]sample is taken from the production line, e.g. from the granules of the silane crosslinkable polyethylene or from the shaped article prior to curing or from another point of the production line and processed into a thin film having a thickness as indicated above which can be subjected to IR spectroscopy, e.g. by pressing or extrusion or some other suitable method. This film is then measured by IR spectroscopy and analyzed as discussed above. From the area measured in the IR spectrum, it can be directly concluded to the gel content of the final product, which allows an excellent process control. If the method shows that the gel content of the finally cured product is outside of a predetermined tolerance range of e.g. +/- 20%, preferably +/- 10%, more preferably +/- 5%, the silane crosslinkable polyethylene can be recycled, and it is not necessary to cure it to find out that the product will not have the required gel content. Furthermore, it is possible to adjust the specific process conditions such as concentrations of silane, free radical source, temperature, process time, etc. in order to modify the silane crosslinkable polyethylene in order to achieve a gel content of the finally cured product as required.

This amendment addresses the concern expressed during the interview that the claims should not cover the analysis of a silane-grafted PE that had been subjected to a purification of ungrafted silane prior to film formation, etc. in which case no ungrafted silane would be expected to be present. While Applicant recognized, in the paragraph bridging specification pages 3-4, that the area of the IR spectrum they monitor does not provide information on whether the vinyl silane is chemically bonded to the polyethylene, nevertheless they found, contrary to the teachings in the art, that when a sample of silane crosslinkable polyethylene production is processed into film and then analyzed that the Si-O-C bond IR signature can and does provide a reliable method for predicting the gel content of the ultimate, crosslinked product.

As explained during the interview, nothing in Fritz suggests this process and, in fact, Fritz teaches away from the presently claimed process at the bottom of page 123 thereof in its direction not to use an IR absorption in the neighborhood of 1060 $cm^{-1}$, the absorption band reported therein for the Si-O-C bond. The fact that Applicant has shown that this portion of the IR spectrum does provide a reliable indicator for gel content in the ultimate crosslinked product is thus clearly patentable. For these reasons, and those expressed at the interview and in Applicants response filed May 20, 2009, Applicants request a Notice of Allowance.

Respectfully submitted,

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